

With respect to "the use of two transducers", second transducer 102a has been added to the replacement sheet for Figure 1. In the second paragraph of page 11 (see Listing of Specification Amendments), please replace "Although not" with "As also", add "102a" after each incidence of "second transducer", replace "The second transducer" with "Second transducer 102a", and add "(as shown)" after "coaxially".

With respect to "the use of hydraulic pressure, gas pressure, or gravity for forming the stream of coupling liquid", dependent Claims 8, 13 and 20, which embody this limitation, are currently cancelled.

With respect to "the introduction of an electrical time delay into the signal path via analog electronic means or via a separate ultrasonic delay line (drawings only show use of impedance matching, no indication of time delay)", delay line 140 has been added to Fig. 1. In the first paragraph of page 11 (see Listing of Specification Amendments), please add the statements "The output signal corresponding to the surface velocity component can be significantly increased by increasing the length of fluid stream 109. A similar signal enhancement can be obtained by introducing an electrical time delay into the signal path via analog electronic means or via a separate ultrasonic delay line 140." These statements are substantially the same as those on page 6, lines 17-23 of the specification.

With respect to "the use of either a phase modulator or a frequency modulator to perform a calibration of the vibrational characteristic of the target (not shown in Figure 5, only discussed in specification)", Figures 2, 3 and 5 explicitly depict phase demodulation configurations (page 14, lines 15 and 25, and page 15, lines 12-13) whereas "Figure 4 illustrates a frequency demodulator..." (Page 15, line 1).

With respect to "the contact accelerometer in contact with the ultrasonic transducer (accelerometer only shown in contact with outside of fluid chamber), a dashed box indicating an alternative location for accelerometer 115 has been added to the replacement sheet for Figure 1. In the first paragraph of page 11 (see Listing of Specification Amendments), please replace "or transducer 102" with "or on transducer 102 (indicated by box with dashed sides)".

Drawings Objections - 37 CFR §1.84

The drawings were objected to under 37 CFR §1.84(p)(4) the reference character "509" was used to designate both a "90° phase shifter" and a "narrow band filter". This defect resulted from a typographical error in the specification (not the drawing) and can be corrected simply by replacing "509" by "510" on line 4, page 16 of the specification. Please make this change, which is consistent with the "narrow band filter" designations on line 1 and line 5 of page 16 (see Listing of Specification Amendments).

Claim Rejections - 35 USC §103

Claims 1-2, 4-6, 8-9, 12-14, 16-17, 19-21, 23-24, and 26 were rejected under 35 USC 103(a) as being unpatentable over Blessing et al. (U.S. Patent 4,738,139) in view of Parker et al. (U.S. Patent 5,086,775).

Claims 7 was rejected under 35 USC 103(a) as being unpatentable over Blessing et al. (U.S. Patent 4,738,139) in view of Parker et al. (U.S. Patent 5,086,775), and further in view of Rollwitz et al. (U.S. Patent 3,585,577)

Allowable Subject Matter

Claims 3, 10-11, 15, 18, 22, and 25 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.